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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|---------------------------|---------------------|------------------|
| 09/919,729 | 08/01/2001 | Don Hideyasu Matsubayashi | 36.P307 | 4313 |

5514 7590 11/30/2006

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| EXAMINER |
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NASH, LASHANYA RENEE

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| ART UNIT | PAPER NUMBER |
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2153

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,729

Applicant(s)

MATSUBAYASHI ET AL.

Examiner

LaShanya R. Nash

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to an Amendment filed 7 June 2006. Claims 4 and 5 are cancelled. Claims 1, 13, and 14 are currently amended. Claims 1-3, and 6-28 are presented for further consideration.

Response to Arguments

Applicant's arguments, see *Remarks*, have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new grounds of rejections are made in view of newly found prior art reference Williams, Jr. (US Patent 6,195,797), as set forth below in the Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-10, 13 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metz et al. (US Patent 5,978,855) in view of Hu (US Patent 6,173,322) and Williams, Jr. (US Patent 6,195,797), hereinafter referred to as Metz, Hu and Williams respectively.

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In reference to claim 1, Metz discloses a method for downloading application software and transmitting messages through one channel of a digital broadcast network in order to decrease bandwidth usage, (column 5, lines 14-35; column 6, lines 27-36; and Figure 1). Metz explicitly discloses:

- In a network (Figure 1-item 15), a method of using a messaging component, which has a network address, and a single network communication channel for sending and receiving messages by a plurality of threads of execution executing on a cable head end (Figure 1-item 15) which communicates with a set top box (Figure 1-item 100), (column 5, lines 25-36; column 7, lines 35-48; and column 8, line 44 to column 9, line 29) the method comprising:
- Establishing, on the network, a direct connection between the CHE and the STB, (column 9, lines 10-20 and column 9, lines 43-67);
- Receiving, via the direct connection, the message containing the network address of the messaging component (column 9, lines 10-20 and column 9, lines 43-67), the message further containing a payload portion (Figure 5A) for identifying one or more of the execution threads (column 17, line 25-column 18, line 15); and
- The messaging component comparing the contents of the payload portion with the information for each of the plurality of execution threads and forwarding the received message to the one or more execution threads based on the results of the comparison (column 9, lines 9-45),
- Selecting a manner of transfer based on the received message (i.e. selectively transmits broadcasts video programming through a first one of the plurality of

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broadcasts channels and software through a second channel; column 5, lines 14-36).

However, Metz does not disclose the method: wherein the received message is used to select a manner of data transfer, which includes selection of a direct transfer using the direct connection between the first network computer and the second network computer, or a referential transfer using a connection from the first network computer identified from a reference to a network server supplied by the second network computer. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Hu.

In an analogous art, Hu discloses a method for distribution of client requests received from a digital computer network in different selective modes (abstract). Hu further discloses the method wherein the received message (i.e. client request) is used to select a manner of data transfer, which includes selection of a direct transfer (i.e. proxy mode where client contacts content server directly; column 11, line 35-column 12, line 10) using the direct connection between the first network computer (i.e. client; Figure 2-item 104) and the second network computer (i.e. selected content server; Figure 2-item 106), or a referential transfer (i.e. redirect mode where network manager responds to client with reference information that allows client to contact content server; column 12, lines 10-52) using a connection from the first network computer(Figure 2-item 104) to a network server (i.e. content server; Figure 2-item 106) identified from a reference to the network server supplied by the second network computer and transferring the data using the selected manner of data transfer (i.e. network request

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manager; Figure 2-item 102). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (Cohen column 1, lines 1-32). However, Metz and Hu fail to disclose the method: supplying the registration information associated with each of the plurality of execution threads executing on the CHE and the STB; and the receiving via the direct connection a message including a job ticket; and controlling the received job ticket from the cable head end. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Williams.

In an analogous art, Williams discloses the method for enabling multiple users of set-top-boxes to concurrently communicate via a network (abstract). Williams further discloses the method: However, Metz and Hu fail to disclose the method: supplying the registration information associated with each of the plurality of execution threads executing on the CHE and the STB (column 10, lines 39-65; column 12, lines 14-35; Figure 15), wherein receiving via the direct connection a message including a job ticket (i.e. request with clientID associated with each client; column 11, line 45-column 12, line 35; Figure 15); and controlling the received job ticket from the cable head end (Figure 27-item 20; column 10, line 39-column 11, line 10). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz and Hu, so as to maintain independent yet concurrent active process for multiple users and reducing the cost associated with integrating the capability in the set-top-box (i.e.

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no additional hardware or software needed for the set-top-box; Williams column 4, lines 1-23).

In reference to claim 13, Metz discloses a method for downloading application software and transmitting messages through one channel of a digital broadcast network in order to decrease bandwidth usage, (column 5, lines 14-35; column 6, lines 27-36; and Figure 1). Metz explicitly discloses:

- A method of communicating between a set-box top (Figure 1-item 100) and a cable head end (Figure 1-item 11) via a digital cable network (Figure 1-item 15), (column 5, lines 25-36; column 7, lines 35-48; and column 8, line 44 to column 9, line 29) the method comprising:
- Establishing a direct connection between the set-box top and the cable head end via a common network communication channel that connects the set-box top and the cable head end, wherein the common network communication channel is shared by a plurality of applications, or execution sub process thereof, to send and receive messages via the digital network, (column 9, lines 10-20 and column 9, lines 43-67); and wherein
- Controlling the plurality of applications or execution sub processes to select a manner of transfer (i.e. selectively transmits broadcasts video programming through a first one of the plurality of broadcasts channels and software through a second channel; column 5, lines 14-36), wherein one of the set-box top and the cable head

end is a recipient and one is a transferor, (i.e. source system to recipient; column 9, lines 9-45).

However, Metz does not disclose the method: wherein selection of the manner of data transfer is based on a message received by the recipient and includes selection of the direct connection between the set-top box and the cable head end, or a referential transfer using a connection from the recipient to a network server identified from a reference to a network server supplied by the transferor, and transferring the data using the selected manner of data transfer. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Hu.

In an analogous art, Hu discloses a method for distribution of client requests received from a digital computer network in different selective modes (abstract). Hu further discloses the method wherein the received message (i.e. client request) is used to select a manner of data transfer, which includes selection of a direct transfer (i.e. proxy mode where client contacts content server directly; column 11, line 35-column 12, line 10) using the direct connection between the first network computer (i.e. client; Figure 2-item 104) and the second network computer (i.e. selected content server; Figure 2-item 106), or a referential transfer (i.e. redirect mode where network manager responds to client with reference information that allows client to contact content server; column 12, lines 10-52) using a connection from the first network computer(Figure 2-item 104) to a network server (i.e. content server; Figure 2-item 106) identified from a reference to the network server supplied by the second network computer; and

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transferring the data using the selected manner of data transfer (i.e. network request manager; Figure 2-item 102; column 12, lines 10-52). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (Cohen column 1, lines 1-32).

However, Metz and Hu fail to disclose the method wherein the receiving via the direct connection a message including a job ticket; and controlling the received job ticket from the cable head end. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Williams.

In an analogous art, Williams discloses the method for enabling multiple users of set-top-boxes to concurrently communicate via a network (abstract). Williams further discloses the method wherein receiving via the direct connection a message including a job ticket (i.e. request with clientID associated with each client; column 11, line 45-column 12, line 35; Figure 15); and controlling the received job ticket from the cable head end (Figure 27-item 20; column 10, line 39-column 11, line 10). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz and Hu, so as to maintain independent yet concurrent active process for multiple users and reducing the cost associated with integrating the capability in the set-top-box (i.e. no additional hardware or software needed for the set-top-box; Williams column 4, lines 1-23).

In reference to claim 2, Metz explicitly shows the limitations, (column 9, lines 10-67).

In reference to claim 3, Metz explicitly shows the limitations, (Figure 5A; column 17, line 25-column 18, line 15).

In reference to claim 6, Williams explicitly shows the limitations, (column 10, lines 39-65; column 12, lines 14-35; Figure 15).

In reference to claim 7, Williams explicitly shows the limitations, (column 10, lines 39-65; column 12, lines 14-35; Figure 15).

In reference to claim 8, Williams explicitly shows the limitations, (column 10, lines 39-65; Figure 15).

In reference to claim 9, Metz explicitly shows the limitations, (column 9, lines 10-20 and column 9, lines 43-67).

In reference to claim 10, Metz explicitly shows the limitations, (column 9, lines 10-20 and column 9, lines 43-67; Figure 5).

In reference to claims 26-28, Metz explicitly shows the limitations, (column 5, line 15-column 6, line 55).

Claims 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metz et al. (US Patent 5,978,855) in view of Chebrolu (US Patent 6,754,714) Hu (US Patent 6,173,322), and Williams, Jr. (US Patent 6,195,797), hereinafter referred to as Metz, Chebrolu, Hu and Williams respectively.

In reference to claim 14, Metz discloses a method for downloading application software and transmitting messages through one channel of a digital broadcast network in order to decrease bandwidth usage, (column 5, lines 14-35; column 6, lines 27-36; and Figure 1). Metz explicitly discloses:

- In a cable head end (Figure 1-item 15), that executes a messaging component and a plurality of execution threads, a method of determining a manner of transferring data to a set top box (Figure 1-item 100), the messaging component having a network address and configured to receive and send a network message for the plurality of execution threads (column 5, lines 25-36; column 7, lines 35-48; and column 8, line 44 to column 9, line 29) the method comprising:
- Receiving a request from one of the execution threads to transfer data to the STB, the request including at least one requirement for carrying out the request, (column 9, lines 10-20 and column 9, lines 43-67);
- Establishing, on the network, a direct connection between the CHE and the STB, (column 9, lines 10-20 and column 9, lines 43-67);
- Based at least in part of the received requirement, determining a proposed manner of transfer. (column 17, line 25-column 18, line 15; column 9, lines 9-45);

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- Transmitting, using the messaging component, a start message to the STB, the start message including the proposed manner of transfer (i.e. selectively transmits broadcasts video programming through a first one of the plurality of broadcasts channels and software through a second channel; column 5, lines 14-36).

However, Metz fails to disclose: in response to a rejection of the proposed manner of transfer, determining whether an alternative manner of transfer is available; and responding using the messaging component, to the rejection with an alternative manner of transfer where one is available. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Chebrolu.

In an analogous art, Chebrolu discloses a method for allocating an alternative manner of transfer (i.e. secondary channel) for access through network when the original channel is unavailable, (column 5, lines 63-67; column 6, lines 30-52; and Figure 3-items 104, 112, 114). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz so as to reduce the adverse effect on customer service associated with denied connections due to lack of allocable channel capacity, (Chebrolu column 2, lines 65-67). However, Metz and Chebrolu do not disclose the method: wherein the received message is used to select a manner of data transfer, which includes selection of a direct transfer using the direct connection between the first network computer and the second network computer, or a referential transfer using a connection from the first network computer identified from a reference to a network server supplied by the second network computer. Nonetheless, these

would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Hu.

In an analogous art, Hu discloses a method for distribution of client requests received from a digital computer network in different selective modes (abstract). Hu further discloses the method wherein the received message (i.e. client request) is used to select a manner of data transfer, which includes selection of a direct transfer (i.e. proxy mode where client contacts content server directly; column 11, line 35-column 12, line 10) using the direct connection between the first network computer (i.e. client; Figure 2-item 104) and the second network computer (i.e. selected content server; Figure 2-item 106), or a referential transfer (i.e. redirect mode where network manager responds to client with reference information that allows client to contact content server; column 12, lines 10-52) using a connection from the first network computer(Figure 2-item 104) to a network server (i.e. content server; Figure 2-item 106) identified from a reference to the network server supplied by the second network computer and transferring the data using the selected manner of transfer (i.e. network request manager; Figure 2-item 102). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz and Chebrolu, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (Cohen column 1, lines 1-32).

However, Metz, Chebrolu and Hu fail to disclose the method: receiving via the direct connection a message including a job ticket; and controlling the received job ticket from the cable head end. Nonetheless, these would have been obvious modifications for one

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of ordinary skill in the art to the aforementioned method, as further evidenced by Williams.

In an analogous art, Williams discloses the method for enabling multiple users of set-top-boxes to concurrently communicate via a network (abstract). Williams further discloses the method: However, Metz and Hu fail to disclose the method: supplying the registration information associated with each of the plurality of execution threads executing on the CHE and the STB (column 10, lines 39-65; column 12, lines 14-35; Figure 15), wherein receiving via the direct connection a message including a job ticket (i.e. request with clientID associated with each client; column 11, line 45-column 12, line 35; Figure 15); and controlling the received job ticket from the cable head end (Figure 27-item 20; column 10, line 39-column 11, line 10). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz and Hu, so as to maintain independent yet concurrent active process for multiple users and reducing the cost associated with integrating the capability in the set-top-box (i.e. no additional hardware or software needed for the set-top-box; Williams column 4, lines 1-23).

In reference to claims 15 and 17-18, and 20-22 Metz shows the limitations, (column 5, lines 14-36; column 9, lines 9-45).

In reference to claim 16, Metz shows the limitations, (Figure 5A; column 17, line 25-column 18, line 15).

In reference to claim 19, Metz shows the limitations, (column 9, lines 9-45).

In reference to claims 23-25 Chebrolu shows the limitations, (Chebrolu column 6, lines 4-10; column 5, lines 53-57; and Figure 2).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Metz, Hu and Williams as previously applied to claim 1 above, and further in view of Beaser et al. (US Patent 6,697,862), hereinafter referred to as Beaser.

In reference to claim 11, Metz, Hu and Williams show substantial features of the claimed method, specifically the network address of the messaging component.

However the reference fails to show the network address comprises a MAC address.

Nonetheless, this would have been an obvious modification for one of ordinary skill in the art at the time of the invention, to the aforementioned method, as further evidenced by Beaser.

In an analogous art, Beaser discloses MAC addressed messaging in a method for networking address maintenance using dynamic host configuration protocol messages in a data-over-cable system, (column 6, lines 38-52 and column 2, lines 27-32). One of ordinary skill in the art would have been motivated to implement this modification into the aforementioned method, so as to improve the maintenance of the network address tables to improve the resource allocation and security in data-over-cable system, (Beaser column 2, lines 56-60).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Metz, Hu and Williams as previously applied to claim 1 above, and further in view of Yoshida (US Patent 6,373,853), hereinafter referred to as Yoshida.

In reference to claim 12, Metz, Hu and Williams show substantial features of the claimed method, specifically the network address of the messaging component. However the reference fails to show the network address comprises a Network Access Service Point (NSAP) address. Nonetheless, this would have been an obvious modification for one of ordinary skill in the art at the time of the invention, to the aforementioned method, as further evidenced by Yoshida.

In an analogous art, Yoshida discloses NSAP address registration employed in a method for dynamic address mapping in which maps ATM addresses and NSAP address with a network, (column 5, line 60 to column 6, line 2 and column 1, line 45-50). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method so as to relieve address information after finishing communication and therefore improving memory use efficiency, (Yoshida column 1, lines 57-64).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShanya R Nash whose telephone number is (571) 272-3957. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LaShanya Nash

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November 27, 2006



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